

Hopis Tap Plant Materials Center

Willows and Cottonwoods Featured for Riparian Restoration

When venturing through the Hopi Reservation in northern Arizona with its vast grass and desert scrublands and mesa-top villages, you don't immediately think about the presence of riparian oases in this arid region. However, on the Reservation there are a number of areas with remnant riparian plant communities in Keams Canyon, Bluebird Spring, Blue Canyon, Deer Spring, and Polacca Wash.

Many of these riparian areas have been degraded by the invasion of exotic species such as salt cedar and by excessive grazing pressure. The Los Lunas Plant Materials Center has been engaged through an interagency agreement with the USDA Forest Service Southern Region to propagate plant materials and develop riparian revegetation techniques for the restoration of riparian areas on Hopi Tribal Lands.

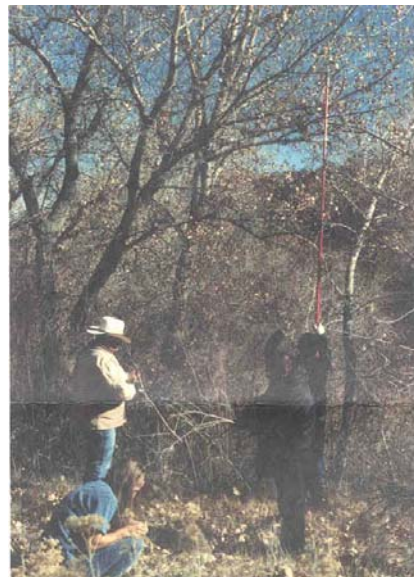
The Hopis have begun an intensive effort to fence riparian-areas and to eradicate invasive species in preparation for reintroducing native riparian plants.

In working with the USFS and Tribe, the Plant Material Center's goal is propagate willow and cottonwood species from cuttings and seed collected from extant populations at a number of sites on the Reservation.

During January and April 2003, US Forest Service and Hopi Office of Range Management personnel collected cuttings. For cottonwoods, male and female plants were identified in the field by micro-examination of flower buds allowing cuttings of both sexes to be collected from several riparian sites on the Reservation. The species being propagated from cuttings include Fremont cottonwood, lanceleaf cottonwood, Goodding's willow, coyote willow, yellow willow, shining willow, and

a possible peachleaf hybrid willow. The PMC has rooted these reproductive cuttings to force flowering and pollination as quickly as possible to provide a seed source in the event that collection of seed from native stands is not possible. The first 50 transplants were picked up by Max Taylor of the Hopi's Office of Range Management in January 2004 for outplanting this spring.

A few remnant plants of quaking aspen can still be found at remote higher elevation sites on the Hopi Reservation. Reintroduction of aspen is being initiated using aspen grown from seed collected by the Navajo Forestry Nursery. These seedlings will be used with a new propagation technique (i.e., multiple stacked flats) developed in Canada to rapidly produce numerous root cuttings for production of aspen transplants. In addition, the Hopi Tribe has asked the PMC to propagate several culturally significant species including desert princesplume, New Mexico olive, skunkbush sumac, cattail and a wild rose possibly Arizona rose.



Pruning poles on the Hopi Reservation